

REMARKS

Reconsideration of the above-identified application in view of the amendments above and the remarks following is respectfully requested.

Claims 1 - 102 are in this Application. Claims 2 – 35, 40 – 46, 50 – 75, 78, 79, and 83 – 102 have been withdrawn from consideration. Claims 1, 36 – 39, 47 – 49, 76 – 77, and 80 – 82, have been rejected under 35 U.S.C. § 103. Claims 1 and 76 have been amended herewith.

Rejoinder

Rejoinder of claims 2 – 35, 40 – 46, 50 – 75, 78, 79, and 83 – 97 is hereby requested on the grounds that they are dependent on an allowable generic claim to the elected first invention.

Amendments To The Claims

35 U.S.C. § 103 Rejections

Claims 1 and 76 have been amended to teach that the continuous waveform, the carrier, is modulated with a signal carrying the positional information, by the positioning element, to form a carrier modulated with a signal.

Kitada US 6,798,403 teaches an ultrasonic system for position detection.

Examiner acknowledges that Kitada fails to teach a continuous waveform including a signal comprising positional information modulated thereon.

In this respect Examiner cites Puma et al.

The claim as amended is distinguished over Puma et al in that the claim as amended requires that the *positioning element* carries out the modulation to the continuous waveform (carrier wave).

In Puma the system mixes the transmitted and received signals to create an interference pattern. Thus no modulation is provided by a positioning device. At most it is provided by mixing of the signals of the host and the positioning device.

In any event, the Merriam Webster Online Dictionary defines the term "modulation" as "to vary the amplitude, frequency or phase of a carrier wave or light wave *for the transmission of information*."

Puma does not qualify for the above definition since there is no *variation of* the amplitude, frequency or phase of the carrier wave.

Rather, as soon as the waves in Puma have passed the interference zone the original continuous properties are recovered. Hence no modulation has occurred.

Contrary to the requirements of claim 1, Kitada has no modulation by the Examiner's own admission and Puma fails to teach *modulation by the positioning element* of the waveform properties, contrary to the requirements of the present claims.

Thus the combination of Puma and Kitada fails to teach modulation *by the positioning element* of the waveform properties.

Indeed it is applicant's contention that Puma does not teach modulation at all since the waveform retains its original properties once the region of interference is passed. Thus the cited combination of Puma and Kitada does not teach any kind of modulation.

Corresponding amendments have been made to claim 76, so that this too recites a continuous waveform which is modulated by making local variations of the waveform property.

The remaining claims are believed to be allowable as being dependent on allowable main claims.

The independent claims are believed to be generic to *all* of the species.

In view of the above amendments and remarks it is respectfully submitted that the rejected claims are now in condition for allowance, and that the withdrawn claims relating to the non-elected species *may be rejoined to the application*. A prompt notice of allowance is respectfully and earnestly solicited.

Respectfully submitted,

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